DOCUMENT RESUME

ED 170 230 SO 011 688

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TITLE The Quality of School Life in Experimental and Traditional Schools in Western Germany.
SPONS AGENCY Ministry of Education and Science, Bonn (West Germany).
PUB DATE 79
NOTE 20p.; Paper presented at Annual Convention of the American Educational Research Association (San Francisco, California, April 1979); Table 1 may not reproduce clearly due to small and broken print type

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Comparative Analysis; *Comparative Education; Educational Alternatives; Educational Assessment; Educational Environment; *Educational Innovation; Educational Needs; Educational Objectives; *Educational Practice; Educational Problems; Educational Research; Elementary Secondary Education; Equal Education; Foreign Countries; Lower Class; Lower Class Students; Low Income Groups; Social Structure; Socioeconomic Influences; *Student Attitudes; Student Motivation; *Traditional Schools
IDENTIFIERS West Germany

ABSTRACT

Student perceptions of educational opportunities in contrasting educational settings in West Germany are explored. Two types of schools predominate in the Federal Republic of Germany. One type, the traditional, is characterized by a high degree of state control of the curriculum, teacher training, years of schooling, and number and type of examinations. Another type, experimental, has evolved since the mid 1960s to mitigate the social selectivity of the school system. Recent reforms have led to the establishment of comprehensive schools which are characterized by a social mix of students in the classroom, experimentation with grouping schemes, humanization of schooling, encouragement of free choice of courses, and frequent change of courses. A study was undertaken in 1976 to compare attitudes, motivation, and achievement of 1,200 lower middle class junior high school students from traditional and experimental schools in Berlin. It was hypothesized that a measurement instrument based on student perceptions of quality of school life (QSL) would shed light on how changes in the learning environment affect students. Statistical analysis of student responses to questions about the quality of school life indicate that students in comprehensive schools have more positive attitudes about all dimensions of their learning environments, are more committed to school work, appreciate freedom of choice, and have better relationships with teachers and schoolmates. Additional research is suggested to determine how to increase effective choice situations. (DB)

ED170230

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

1979 ANNUAL CONVENTION

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SYMPOSIUM: THE QUALITY OF SCHOOL LIFE - A NEW DIRECTION FOR EVALUATION

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THE QUALITY OF SCHOOL LIFE IN EXPERIMENTAL AND TRADITIONAL SCHOOLS IN WESTERN GERMANY

This research was supported by the Federal Ministry for Education and Science, Federal Republic of Germany

SØ 011 688

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The Quality of School Life in Experimental and Traditional Schools in Western Germany

The school system of the "Länder" of the Federal Republic of Germany traditionally has been characterized by a high degree of state control, regulating not only years of schooling, training, examination, and accreditation of teachers but the number of subjects as well, the syllabus, the books used, and even the number of teacher-made tests to be administered during the school year. This abundance of regulations, however, has not been one of the most criticized aspects of school in the last 20 years. The critique and most of the reforms since the mid-sixties have been directed against the selectivity of the school system, within pupils beyond grade 4 are placed into three different types of school with a different graduation level each, thus perpetuating the social stratification. These reforms have led to the establishment of a number of "Comprehensive Schools", partly as regular alternative to the tripartite system, partly on a trial-basis only. The main goals of these schools and the main interest of the research going along with it had been to secure "equal educational opportunities" for pupils of different social backgrounds and to bring about a social mix in the classes. More than 10 years of research showed that these goals are hard to reach when a fixed time is provided for the instruction of a pre-

scribed content to pupils of a wide range of abilities. It became necessary to build groups more or less homogeneous in aptitude in some subject areas (Mathematics, Foreign Language, Mother Tongue, Physics and Chemistry). These groups tended to have a social selection effect similar to the tripartite system these new schools were supposed to replace. To find more sensible ways of grouping, the Federal Ministry of Education and Science supported several school projects (Modellschule) with different grouping schemes.

The author has been involved in the evaluation of one of these "model schools" in Berlin since 1973. It was in Berlin that the first comprehensive school in the Federal Republic was founded and comprehensive schools have since become part of the regular school system. The grouping in these schools is done according to achievement in each of the subject areas with the provision for regrouping every half year. The model school, however, allows grouping by choice on the part of the students in all subject areas. It was hoped for that this grouping procedure would help to bring about more self-responsibility in learning, to develop a wider array of different interests and to secure less socially biased groups. Trying this, the aforementioned model school found itself in accord with a shifted public interest in education.

"Equal educational opportunity" defined as the ratio of different levels of education for the different social classes is no longer the center of interest. Other outcomes of schooling, especially the "socializing effects" (FEND, 1976), were recognized as being important that up to then had been considered only as moderators of achievement (WALBERG, 1969; MOOS & MOOS, 1978). Under the banner of "humanizing schooling", these outcomes are now valued in their own right as effects of different learning environments. This change of public and pro-

fessional interest is due to a number of reasons, not the least being Phil JACKSONs (1968) stimulating description of "Life in the classroom". Along with American studies (TRICKETT & MOOS, 1974; MAEHR, 1976; EPSTEIN & McPARTLAND, 1976) an extensive German study appeared in 1977 (FEND, 1977), comparing the three traditional types of school and the comprehensive school with regard to a great number of variables like anxiety, stress, locus of control, self concept, school involvement, value orientation, autonomy etc. These studies show that there are a great number of interesting and relevant dimensions of "learning environment" but more research is still needed on a variety of possible effects of school climate (besides achievement). One could imagine that it may be sufficient in some instances to identify different learning environments by some organizational criteria only and to focus attention on the different effects of these environments, for instance urban vs. rural schools (RANDHAWA & MICHAYLUK, 1975), open vs. traditional instruction (EPSTEIN & McPARTLAND, 1975), tripartite vs. comprehensive school systems (WEISS & UTZT, 1975; FEND, 1977). Such comparisons require a measuring device that meets the conventional standards and that is easily applicable in standard school setting. Thereby it would be possible not only to describe but also to evaluate schools of different organizational structure with regard to these non-cognitive effects.

The evaluation of the model school consisted in probing mainly different non-cognitive effects. Since 1973 a number of studies have appeared that deal with the conditions and patterns of choice, with the effects of the grouping system on the heterogeneity of the learning groups, and with questions as to social integration (FREESE, 1978; SCHEERER, 1977).

These studies and additional observations suggested that the main differences between grouping-by-choice systems and heteronomous grouping consist in increasing student autonomy and in giving students an "illusion of freedom". It was expected that this might be reflected in the perception of the school environment by the students and thus in a change in "school climate". In order to test these hypotheses, a comparative study was called for. It was a lucky chance that there is a normal comprehensive school in the neighbourhood of the "model school" that appeared to be similar in most aspects except the grouping scheme. Therefore a study was planned comparing these two schools; the Quality of School Life Scale (QSL; EPSTEIN & McPARTLAND, 1976) was selected for its apparent validity as to the questions asked.

Characteristics of the schools involved

The two schools in question are both comprehensive junior high schools (grades 7 through 13) including some senior high classes situated in the same reconstruction district of Berlin of a mostly middle and lower class neighbourhood. With 1200 resp. 1400 students and the same teacher to student ratio, both are of comparative size. There are no significant differences as to the teaching staff with respect to age, sex and training. Both schools are housed in new buildings with the same furnishing, space per capita and equipment (library, dining area, laboratories, shops, etc.). The syllabus and the curricula are laid down by the Ministry of Education. It regulates the number of subjects (12), content, number of weekly lessons, the number of teacher-made tests during a year serving as basis for the half-yearly grade-reports, and the class size (26 to 33). After tenth grade students

leave school with diplomas equivalent to the diplomas of one of the three traditional schools i.e. Hauptschule, Realschule, Gymnasium respectively. In contrast to the traditional schools these two schools are run on a full-day schedule (8a.m. to 4p.m.) with the provision of subsidized lunch for all students, thus attracting especially children of parents both working. However, the two schools differ with respect to the organization of instruction.

The regular comprehensive school (RCS) is made up of year-groups of 240 students in eight classes (core-groups).During the first semester the students receive all the instructions within this core-group. An increasing number of subjects is later taught in achievement-level courses (7th grade: Mathematics, English; 8th grade: Physics, Chemistry; 9th grade: Literature). These achievement courses recruit their members out of the entire year-group according to the grades in the respective subjects. The courses are defined by four levels of achievement which are called A, G, E, F, whereby A represents the low-achievement course with a reduced group size and F the high-achievement course. Beside these courses students have the choice between a second foreign language (French, Latin, Russian), science and crafts. This means, each student is a member of up to eight instructional groups, beginning with only one in 7th grade and increasing each year to eight instructional groups in the ninth and tenth grade. This means also that in these grades no more than two or three students of a year group are instructed by the same ten to eleven teachers, requiring more than 50 teachers to provide the necessary instruction for 240 students.

The model comprehensive school (MCS) is made up of year groups of 300 students each equivalent to 10 classes. However, all the groupings take place within a half-year group only, equivalent to five classes. Contrary to the RCS the students of this school belong to six different instructional groups from the beginning of the seventh grade. These groups are not formed with reference to single subjects but to blocks of subjects:

Block 1: Humanities (Literature, History, Geographie),
Block 2: Science (Physics, Chemistry, Biology, Crafts),
Block 3: Arts (Music, Fine Arts, Phys. Ed.),
Block 4: Mathematics, English,
Block 5: second Foreign Language or Crafts.

Five courses are offered within each block which differ for instance as to the instructional time allotted for one or two subjects, as to the achievement-level students want to cope with (block 4 only) or as to the number of subjects taken at one time (alternation of subjects every three months). These grouping criteria, however, are not much stressed and not widely known by the students.

Students are not assigned to these courses but are required to choose one of the five courses in every block. The membership in one course of one block can be chosen independently of the membership in a course of the other subject blocks. This requires that each course is taught by a different teacher, thus an average of 52 teachers teach courses in one half-year group of 150 students, giving a wide selection to choose from even for the entering seventh-grade student. Every three months the students can decide whether to stay-on in their respective courses or to change one or up to all five. So-called tutorials, consisting of 15 students and one tutor serve as the only permanent social setting during the four high-school year.

The groups formed by choice of students are all rather heterogeneous with respect to interest and achievement (to a lesser extent in Mathematics/ English).
The freedom of choice, though, is limited among others by the fact that all the groups have to be of equal size and by the unwillingness on part of the students to leave courses for social reasons. However, all people involved in this school maintain that even the mere possibility to change courses, teachers, and group-mates would lead to a more friendly and less threatening school climate even when actual changes are rather rare (FREESE, 1978).

Method

All 303 seventh and 560 eighth grade students from the model school (MCR) were tested in December 1976 with a German adaption of the QSL and the MIAR (CRANDALL, KATKOVSKY & CRANDALL, 1965). The planned repetition of these tests during the fall of 1978 was not possible due to the unwillingness of the school to participate. At the other school QSL was given in November 1978 to a sample of two core-groups from eight in each of the grades 7 through 10. These groups constituted a representative sample of the year groups, since the assignment of each new student to a core-group is made as to ascertain a balanced mixture of the group with respect to sex, achievement, and social class.
In both schools the tests were given about three months after the beginning of a new school year during regular lesson periods in the morning.

Instruments

Information concerning the dimensions on which social environments differ between school was obtained from the QSL. This instrument, consisting of 27 items, is given to the students

to tap their view on the quality of life at school on three dimensions/subscales. Details on this instrument and its rationale can be found in EPSTEIN & McPARTLAND, 1976. In addition to this scale a number of other data were collected. Sex, grade, grade-point-average and course-memberships were taken from the school files, a questionnaire was administered to measure the perception of the different courses in Mathematics and English on four dimensions (ability, interest in instruction, quality of social relations, level and quality of instruction). The short version MIAR was administered to the MCR-group only, its twenty items render one subscore on self-responsibility for success in school (LOC+) and one on self-responsibility for failure in school (LOC-).
In addition to these measures about 40 lesson-periods were observed at both schools to gain an impression of the quality of instruction, the use of innovative teaching methods and of adaptation of instruction to the wide range of abilities. Several long discussions with teachers and principals served the purpose to get to know better the schools, their funtioning, and their particularities.

Results

a) Item analysis of the German version of the QSL
The QSL was administered to 303 seventh und 560 eighth grade students of the model school.
Table 1 lists representative items, item-to-subscale correlations for this group of students and for the American sample (EPSTEIN & McPARTLAND, 1976), the means of the items and the correlations are very similar with the exception of the more positive reactions towards their teachers by the German group due to its restricted age range.

Table 1.

Representative Items from the Quality of School Life Scale (American values in parentheses)

Item	Scoring* I/0	Mean of Scored Item	Item-to-Subscale Correlation	Item-to-Total Scale Correlation
A. Satisfaction with School (SAT), 5 items including:				
The school and I are like: Good Friends; Friends, / Distant Relatives; Strangers; Enemies.	MC	.48 (.54)	.66 (.74)	.50 (.63)
I like school very much	T/F	.56 (.42)	.79 (.83)	.61 (.67)
Most of the time I do not want to go to school.	F/T	.49 (.54)	.68 (.71)	.58 (.57)
B. Commitment to Classwork (COM), 11 items including:				
Work in class is just busy work and a waste of time.	SN/AOS	.67 (.50)	.45 (.63)	.39 .48
In class, I often count the minutes till it ends.	F/T	.24 (.40)	.47 (.54)	.42 (.49)
In my classes I get so interested in an assignment or project that I don't want to stop work. Everyday; quite often; / hardly ever never.	MC	.28 (.42)	.34 (.56)	.24 (.47)
The things I get to work on in most of my classes are: Great stuff—really interesting to me; Good stuff—pretty interesting to me; / OK—school work is school work; Dull stuff—not very interesting to me; Trash--a total loss for me.	MC	.51 (.41)	.60 (.71)	.56 (.67)
C. Reactions to Teachers (TCH), 11 items including:				
I wish I could have the same teachers next year.	T/F	.70 (.38)	.40 (.52)	.30 (.46)
Thinking of my teachers this term, I really like: All of them; Most . . . ; / Half . . . ; One or two . . . , None . . .	M/C	.48 (.53)	.58 (.65)	.58 (.64)
Most of my teachers want me to do things their way and not my own way.	F/T	.49 (.34)	.48 (.50)	.39 (.41)
Teachers here have a way with students that makes us like them.	T/F	.58 (.48)	.60 (.55)	.52 (.46)
D. Quality of School Life (QSL)				
The total scale is comprised of the 27 items from the three scales listed above.				

* Item response formats include T/F = true/false; MC = multiple choice; and AO SSN = always, often, sometimes, seldom, never. Each item is scored 1 or 0 as indicated by the slash (/) shown in the scoring column or in the multiple choice item responses. Response categories preceding the slash = 1; categories following the slash = 0. Item scores are then summed for subscale and scale totals.

Table 2.

Properties of QSL

Scale	No. of items	N	$\bar{x}$	s	skew-ness	kur-tosis	reliability KR-20
SAT	5	863	2.48 (2.33)	1.74 (1.84)	- 0.01	- 1.3	.75 (.79)
COM	11	863	5.06 (5.04)	2.75 (3.12)	0.07	- 0.84	.76 (.80)
TCH	11	863	5.48 (5.11)	2.68 (2.75)	0.04	- 0.82	.71 (.73)
QSL	27	863	13.02 (12.14)	6.13 (6.46)	0.003	- 0.79	.81 (.89)

Table 2 reports the means, standard deviations, skewness, kurtosis, and reliability coefficients. The higher means of the German sample can be attributed to the restricted age range. A factor analysis resulted in a good reproduction of the subscales SAT and COM on separate factors and a splitting of the TCH-items into two additional factors, one representing the general attitude toward the teachers, the other being a dimension of the authority structure between teacher and students. Similar results were obtained for the American instrument. The intercorrelations of the subscales were high even when achievement was partialled out (Tabel 3).

Table 3.

Intercorrelations of the subscales of the QSL (partial correlations with GPA partialled out above the diagonal)

	SAT	COM	TCH	QSL
SAT	-	.63	.51	.80
COM	.67	-	.52	.87
TCH	.55	.56	.	.82
QSL	.82	.88	.85	-
GPA	.29	.30	.29	.34

Evidence for concurrent and discriminative validity of the QSL is available to a lesser degree only for the German instrument. Achievement (GPA) and self-responsibility for success (LOC+) of failure (LOC-) are correlated with the QSL and its subscales in Table 4. Achievement (GPA), as defined in school, influences SAT, COM, TCH, and QSL to the same degree. The re-

Table 4.

Correlation of QSL with achievement (GPA) and self-responsibility (in paranthesis the respective values of the American version)

	GPA	LOC	LOC+	LOC-
QSL	.34(.22)	.24(.27)	.22	.13
SAT	.29	.17	.14	.10
COM	.30	.19	.25	.04
TCH	.29	.24	.16	.19

latively high correlation may be due to the fact that students of all achievement levels are represented in the courses. FEND(1976) could show that in comprehensive schools exists a higher correlation between achievement and school involvement than in each of the three selective schools of the tripartite system.

The influence of self-responsibility is somewhat less. It doesn't concern the satisfaction with school (SAT) as much as commitment to school work (COM) thus supporting the findings of MAEHR (1976,p. 458) who found in the attribution of "self-as-a-cause" in achievement situations a prerequisite for "continuing motivation".

This may suffice to demonstrate the equivalence of the German adaptation to the American original.

b) Effects of two organizational schemes

Since data for the grades nine and ten are not available from the model school, comparisons will have to be based on the results from grades 7 and 8 only. An adjustment is made for different group size.

Table 5.

Mean scores of QSL and its subscales for two schools in grades 7 and 8, adjusted for unequal group size

School	Sex f	Sex m	N	SAT	COM	TCH	QSL
RCS	49	63	112	1.96	3.76	4.74	10.47
MCS	412	420	863	2.59	5.26	5.68	13.54

Table 5 shows clearly that students of the model school see their learning environment more positive in all dimensions of the QSL than the students of the regular comprehensive school. These differences are most pronounced in their general satisfaction with school and in their commitment to school work, not so much in their attitudes toward their teachers. This latter can partly be attributed to the general effect of the first two dimensions due to their intercorrelations with TCH. This becomes clear when looking at the answers for the two grades separately (Table 6)

In grade seven no differences are found between the two schools for TCH. This could be expected since this concerns the reactions to 20 resp. 50 teachers which precludes the influence of one or two extreme teachers. Besides that, two recent studies have shown that comprehensive school teachers are more homogeneous with respect to age and liberal attitudes toward their students.

Table 6.

Mean scores of QSL for the two schools in grades 7 and 8

Grade	School	N	SAT	COM	TCH	QSL
7	RCS	56	2.54	4.21	6.17	12.93
	MCS	303	3.00	5.96	6.34	15.31
sign.			s	ss		ss
8	RCS	56	1.37	3.32	3.32	8.01
	MCS	560	2.19	4.57	5.02	11.78
sign.			ss	s	ss	ss
7 - 8	RCS		1.1ss	.9	2.9ss	4.9ss
	MCS		.8s	1.4ss	1.3s	3.5ss

than teachers of other schools. All teachers are new to the students and the fact of choosing between "unknowns" or being assigned to them does not seem to make a difference.

This is different for grade 8. The students of MCR know that they can avoid a teacher by choosing another course. A few might have tried this already, for the majority, however, just knowing of this possibility makes the difference in their attitudes toward their teachers (and perhaps vice versa). Such freedom does not exist for the students of RCS. On the contrary, they are faced with the possibility of being assigned to another course and teacher when their grades fall below or above a certain mark. This, of course, is more of a threat to the middle and upper students than to those in the lowest courses, as can be seen from the difference between the mean TCH-score for the low and the high achievement students of .5 in the RCS compared to 1.1 in the model school (MCS).

Classroom observations in both school settings gave no indication of different instructional procedures or content areas in both schools. The instruction was done very traditionally characterized by a high degree of teacher control. The lessons appeared even more boring in the model school since they lasted for 80 minutes compared to 45 minutes in the other school. The consistently high differences in COM must therefore be attributed to the element of choosing a course (and its teachers). This would stay in accordance with WANG (1976) who could show that elementary school children worked harder when they could choose their task. In grade 8 the effect of course selection on COM is less pronounced. Could this be attributed to the greater awareness of the students that not all of their requests for change of courses can be realized due to restrictions of group size?

The scale SAT is assumed to be a measure of the social structure within a school. The results show differences between the two schools in grade 7 but more so for grade 8, thus reflecting the introduction of grouping by ability in four subject areas for the students in the RCS in the meantime. This means that an eighth grader receives one third of his instruction in other settings than in his core-group. The students in the model school never had a core-group. They learned to consider the half-year group as their "class", making sure, however, that they would be in most courses with their two or three best friends.

c) Differences between age groups

The decrease in all scores from grade seven to eigth is much higher than suggested by the American data. This is partly due to the unusually high scores for grade seven, reflecting the

novelty effect of being in a new big school after six years of elementary school. The eighth grade scores would then give a more realistic expression of the feeling toward school and the American data would suggest a gradual decrease from there on. This hypothesis can not be supported with the data available of RCS (Table 7), where no trend in the expected direction can be found. There is even a tendency for an increase of the scores, mainly for TCH. This increase is caused by the items on how teachers exercise their authority, indicating an increased student participation in decision making in higher grades.

Table 7.

QSL by grade for RCS (n = 208)

grade	SAT max. 5 Pkte.		COM Max. 11 Pkte.		TCH max. 11 Pkte.		QSL max. 27 Pkte.	
	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s
	1,83	1,65	3,78	2,72	4,80	2,60	10,41	5,76
7.	2,54		4,21		6,18		12,93	
8.	1,37		3,32		3,32		8,08	
9.	1,91		3,82		4,18		9,91	
10.	1,44		3,88		5,80		11,12	
F	7,88**		1,65		17,27**		8.88**	

Trying to interpret the lack of decrease in the other subscales one has to consider the relatively small sample involved. However, the selective character of these four years has to be considered as well. During these years a decision is reached whether a student has to leave school after ninth or tenth grade to enter the labour market or if he can go on to senior high school, "Abitur", and university. This makes it very obvious to every student how important is schooling and might lead to a stable interest in school and instruction - at least for those students still seeing a chance for a better diploma. The others usually found in the

Table 8.

QSL means for different achievement-level courses in Mathematics (n = 208)

Course level	A	G	E	F	ANOVA
SAT	1.06	1.54	1.58	1.83	ns
COM	2.31	3.38	3.35	3.66	ns
TCH	4.47	4.67	4.13	4.03	ns
QSL	8.85	10.06	9.58	9.52	ns

in the lowest course in Mathematics (A-course) have given up hope long before and it requires much commitment on the part of the teachers to keep them in school. Both is reflected in the values of Table 8. Some of the students of course A (i.e. between 6% and 10% of a year group) leave school at the end of ninth grade which might influence the scores for the tenth grade (Table 7) directly (when some students with very low scores are missing from the sample) as well as indirectly (when the most disruptive students are no longer in the school).

Discussion

The purpose of this study was to show that the QSL can be employed in the evaluation of innovative school systems. It allows the measurement of effects of the learning environment that are usually claimed as prospective outcomes of such systems but seldom shown to be achieved. The QSL with its three subscales appears to be a reliable and discriminative device to cover some of the more salient aspects of life in school, thus extending the scope of social indicators on the quality of education. The results lend further support to the suggestion by EPSTEIN & McPARTLAND (1976, p.26) "that the maturational influence may not be an inevitable artifact, but may be due to the nature of school environment".

The other purpose of this study was to measure the effects of the introduction of some freedom of choice into an otherwise rigidly controlled school system. The results indicate that the effects of such a limited innovation are more far-reaching than expected. The commitment to school work is considerably higher despite the lack of any visible change in instruction or content matter. This sheds a new light on the importance of the "illusion of freedom and control" (SKINNER) for learning. However, the teacher-student relationship is affected as well when students can have the impression they attend the instruction by one teacher on their own free will. The same applies to the relations with schoolmates when group membership no longer depends on fate alone.

More research is needed on the nature of change effected by choice schemes but even more important is the search for more effective choice situations, requiring experimentation with choice alternatives of different quality, weight and numbers. The QSL may prove a valuable device in this process due to its sensitivity to small changes in the learning environment as perceived by the student.

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